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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,392	03/25/2004	Kenichi Fujita	1713.1012	5082

21171 7590 07/02/2007

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EXAMINER	
NADKARNI, SARVESH J	
ART UNIT	**PAPER NUMBER**
2629	
MAIL DATE	**DELIVERY MODE**
07/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/808,392	FUJITA ET AL.	
	Examiner	Art Unit	
	Sarvesh J. Nadkarni	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-35 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 03/25/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al., United States Patent, Patent Number US 6,539,418 B1 (hereinafter referred to as "Schneider '418") in view of Coleman United States Patent Application Publication Number US 2004/0042547 A1 (hereinafter referred to as "Coleman") and further in view of Lupu, United States Patent Number 6,721,950 B1 (hereinafter referred to as Lupu '950).

3. With regard to claim 1 Schneider '418 discloses **a switch** (see column 5, lines 40-45, and further element 74, 74a and 74b as depicted in FIG. 1A and FIG. 1B, further described in column 5, lines 61-67 and continued through column 6, lines 1-15) **that selectively switches from one terminal to another among a plurality of terminals** (see column 14, lines 4-14, the switch selects the corresponding switch port of the target computer) **to which a computer is connected** (see FIG. 1A and 1B; elements 20a, 20b, and 20c, further described in column 3, lines 35-45), **and that can be remotely operated by a remote-control computer** (see column 3, lines 57-60; additionally, see FIG. 1A –1C, element 12, "controlling computer") **connected to a predetermined network** (see column 3, lines 45-55).

4. However, Schneider '418 differs from the claimed invention in that Schneider '418 does not fully teach **the switch comprising an information acquiring unit that acquires cursor**

location information from the remote-control computer; an image extracting unit that extracts a cursor peripheral image from an image storing unit that stores an image obtained from the computer, based on the cursor location information acquired by the information acquiring unit; and a cursor image transmitting unit that transmits the cursor peripheral image, extracted by the image extracting unit, to the remote-control computer.

5. In the same field of endeavor, Coleman teaches **the switch comprising an information acquiring unit that acquires cursor location information from the remote-control computer** (see page 2, paragraph [0017] and further described at page 13 paragraph [0163]); **an image extracting unit** (see FIG. 4, element 401 and 221 further described at page 10 paragraph [0124]) **that extracts a cursor peripheral image** (see page 2, paragraph [0017] and further described at page 13 paragraphs [0162] and [0163] and FIG. 7B) **from an image storing unit that stores an image obtained from the computer** (see FIG 4 element 402, frame buffer further described at page 10 paragraph [0124]), **based on the cursor location information acquired by the information acquiring unit** (see page 2, paragraph [0017] and further described at page 13 paragraph [0163]); **and a cursor image transmitting unit that transmits the cursor peripheral image, extracted by the image extracting unit, to the remote-control computer** (see page 10 paragraph [0132], compression device 229 implements send compressed message block 415 and compressed message block 415 sends compressed data to controlling computer).

6. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the transmission system as taught by Coleman into the switch of Schneider '418 because both are within the same field of endeavor and the combination would take advantage of temporal redundancy when compressing and

transmitting video data across a network without significant loss to image quality (see Coleman page 2, paragraph [0018]).

7. However, Schneider '418 in view of Coleman does not fully teach **acquiring cursor location information from the remote-control computer** and **extracting a cursor peripheral image from the computer.**

8. In the same field of endeavor, Lupu '950 teaches **acquiring cursor location information from the remote-control computer** (see Lupu '950 column 3, lines 3-25) and **extracting a cursor peripheral image from the computer** (see Lupu '950 column 3, lines 26-34).

9. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the cursor acquisition system of Lupu '950 into the network display system of Schneider '418 in view of Coleman because it would improve network efficiency (see Coleman page 2, paragraph [0017]).

10. With regard to claim 2, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 1, wherein the image extracting unit detects an image change from a difference between a first image obtained from the computer** (see Coleman, page 5 paragraph [0061] "current frame buffer") **and a second image obtained after the first image** (see Coleman paragraph [0061] "compare frame buffer"), **and extracts a predetermined region that includes the changed portion of the second image with respect to the first image** (see Coleman, page 5, paragraph [0059] through page 6 paragraph [0065]).

11. With regard to claim 3, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 1, further comprising an image transmitting unit that transmits a general image to the remote-control computer** (see Schneider '418, at

column 6, lines 15-20, describing the operation of the network switch), **wherein, when acquiring the cursor location information from the remote-control computer, the image transmitting unit stops transmitting the general image to the remote-control computer** (see Coleman, FIG. 9, further described in page 13, paragraph [0171] continued at page 14 through paragraph [0177]), the cache memory provides imaging until updateable data detected) **and, after the cursor peripheral image is transmitted by the cursor image transmitting unit** (see Coleman page 14, paragraph [0173], merge frame buffer is updated with any changed or new data), **the image transmitting unit resumes transmitting the general image to the remote-control computer** (see Coleman, page 14 paragraph [0177]).

12. With regard to claim 4, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 1, further comprising an image processing unit that performs image processing on a general image to be transmitted to the remote-control computer** (see Schneider '418, at column 6, lines 15-20, describing the operation of the network switch), **wherein, when acquiring the cursor location information from the remote-control computer, the image processing unit stops performing the image processing on the general image,** (see Coleman FIG. 9, the image processing waits until cache is updated to resume; see page 14 paragraph [0177]) **and, after the cursor peripheral image is transmitted by the cursor image transmitting unit** (see Coleman, page 14, paragraph [0173], merge frame buffer is updated with any changed or new data) **the image processing unit resumes the image processing on the general image** (see Coleman, page 14 paragraph [0177], the cycle resumes with additional frames).

13. With regard to claim 5, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 3, wherein the image transmitting unit detects an image change from a difference between a first image obtained from the computer** see Coleman, page 5 paragraph [0061] "current frame buffer") **and a second image obtained after the first image** (see Coleman paragraph [0061] "compare frame buffer"), **and transmits a predetermined region that includes the changed portion of the second image with respect to the first image, to the remote-control computer** (see Coleman, page 5, paragraph [0059] through page 6 paragraph [0065]).

14. With regard to claim 6, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 1, wherein the image extracting unit extracts the cursor peripheral image at predetermined intervals** (see Schneider '418 describing the "digitizer controller application periodically requesting screen data at column 6, lines 65 to end and continued at column 7, lines 1-7).

15. With regard to claim 7, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 6, wherein the predetermined intervals are changed in accordance with a preset value transmitted from the remote-control computer** (see Schneider '418 at column 9, lines 53-67).

16. With regard to claim 8, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 6, wherein the predetermined intervals are changed in accordance with the congestion level of the network** (see Schneider '418 at column 9 lines 40-51).

17. With regard to claim 9, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 1, further comprising an image compressing unit that compresses an image to be transmitted to the remote-control computer** (see Schneider '418 at but not limited to column 17 lines 1-21).

18. With regard to claim 10, Schneider '418 in view of Coleman and further in view of Lupu '950 teaches **the switch as claimed in claim 9.** However, Schneider '418 in view of Coleman and further in view of Lupu '950 does not explicitly teach **the image compressing unit changes a compression technique or a compression ratio in accordance with the congestion level of the network.**

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate **a different compression technique in accordance with congestion level of the network** for the purposes of efficiently utilizing bandwidth (see Schneider '418 at column 2 lines 45-50, and the numerous compression techniques at column 16, lines 55 to end and continued at column 17, lines 1-31).

20. With regard to claim 11, it is similarly analyzed as claim 1 and therefore rejected under the same rationale.

21. With regard to claim 12, it is similarly analyzed as claim 2 and therefore rejected under the same rationale.

22. With regard to claim 13, it is similarly analyzed as claim 3 above and therefore rejected under the same rationale.

23. With regard to claim 14, it is similarly analyzed as claim 1 and therefore rejected under the same rationale.

24. With regard to claim 15, it is similarly analyzed as claim 2 and therefore rejected under the same rationale.

25. With regard to claim 16, it is similarly analyzed as claim 3 above and therefore rejected under the same rationale.

26. With regard to claim 17, it is similarly analyzed as claim 4 above and therefore rejected under the same rationale.

27. With regard to claim 18, it is similarly analyzed as claim 5 above and therefore rejected under the same rationale.

28. With regard to claim 19, it is similarly analyzed as claim 6 above and therefore rejected under the same rationale.

29. With regard to claim 20, it is similarly analyzed as claim 7 above and therefore rejected under the same rationale.

30. With regard to claim 21, it is similarly analyzed as claim 8 above and therefore rejected under the same rationale.

31. With regard to claim 22, it is similarly analyzed as claim 9 above and therefore rejected under the same rationale.

32. With regard to claim 23, it is similarly analyzed as claim 10 above and therefore rejected under the same rationale.

33. With regard to claim 24, Schneider '418 in view of Coleman and further in view of Lupu '950 discloses **a method of displaying an image transmitted from an information processing apparatus connected to a predetermined network** (see Schneider '418, see column 5, lines 40-45, and further element 74, 74a and 74b as depicted in FIG. 1A and FIG. 1B, further

described in column 5, lines 61-67 and continued through column 6, lines 1-15), **comprising the steps of: acquiring cursor location information** (see Coleman page 2, paragraph [0017] and further described at page 13 paragraphs [0162] and [0163] and FIG. 7B); **transmitting the cursor location information to the information processing apparatus** (see Coleman page 10 paragraph [0132], compression device 229 implements send compressed message block 415 and compressed message block 415 sends compressed data to controlling computer); **and combining a first image obtained from the information processing apparatus** (see Coleman page 13, paragraph [0168], the first image block obtained may be cached in local memory or received from remote location via network and switch as described in Schneider '418, see column 5, lines 40-45, and further element 74, 74a and 74b as depicted in FIG. 1A and FIG. 1B, further described in column 5, lines 61-67 and continued through column 6, lines 1-15) **with a second image in accordance with the cursor location information acquired from the information processing apparatus that have received the cursor location information in the previous step** (see Coleman page 2, paragraph [0017] and further described at page 13 paragraphs [0162] and [0163] and FIG. 7B, second image includes cursor related information; the combination is described in Coleman page 13, paragraph [0169], merge block 811).

34. With regard to claim 25, it is similarly analyzed as claim 1 above and therefore rejected under the same rationale.

35. With regard to claim 26, it is similarly analyzed as claim 2 above and therefore rejected under the same rationale.

36. With regard to claim 27, it is similarly analyzed as claim 3 above and therefore rejected under the same rationale.

37. With regard to claim 28, it is similarly analyzed as claim 4 above and therefore rejected under the same rationale.

38. With regard to claim 29, it is similarly analyzed as claim 5 above and therefore rejected under the same rationale.

39. With regard to claim 30, it is similarly analyzed as claim 6 above and therefore rejected under the same rationale.

40. With regard to claim 31, it is similarly analyzed as claim 7 above and therefore rejected under the same rationale.

41. With regard to claim 32, it is similarly analyzed as claim 8, above and therefore rejected under the same rationale.

42. With regard to claim 33, it is similarly analyzed as claim 9 above and therefore rejected under the same rationale.

43. With regard to claim 34, it is similarly analyzed as claim 10 above and therefore rejected under the same rationale.

44. With regard to claim 35, Schneider '418 in view of Coleman and further in view of Lupu '950 discloses **an image displaying program product for operating a computer to display an image transmitted from an information processing apparatus connected to a predetermined network** (see Coleman, page 1, paragraph [0003] through [0006]), **the image displaying program product causing the computer to function as: an information acquiring unit** (see Coleman FIG. 4, element 401 and 221 further described at page 10 paragraph [0124]) **that acquires cursor location information** (see Coleman page 2, paragraph [0017] and further described at page 13 paragraphs [0162] and [0163] and FIG. 7B); **an information transmitting**

unit that transmits the cursor location information, acquired by the information acquiring unit, to the information processing apparatus (see Coleman page 10 paragraph [0132], compression device 229 implements send compressed message block 415 and compressed message block 415 sends compressed data to controlling computer); **and an image combining unit** (see Coleman FIG. 8 and FIG. 9 illustrating decompression method further described on page 13, paragraph [0167] through [0171] and continued on page 14, paragraphs [0172] through [0177]) **that combines a first image obtained from the information processing apparatus** (see Coleman page 13, paragraph [0168], the first image block obtained may be cached in local memory or received from remote location via network and switch as described in Schneider '418, see column 5, lines 40-45, and further element 74, 74a and 74b as depicted in FIG. 1A and FIG. 1B, further described in column 5, lines 61-67 and continued through column 6, lines 1-15) **with a second image in accordance with the cursor location information transmitted from the information transmitting unit that have received the cursor location information from the information processing apparatus** (see Coleman page 2, paragraph [0017] and further described at page 13 paragraphs [0162] and [0163] and FIG. 7B, second image includes cursor related information), **the image combining unit then outputting a composite image to a display unit** (see Coleman page 13, paragraph [0169], merge block 811).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarvesh J. Nadkarni whose telephone number is 571-270-1541. The examiner can normally be reached on 8:00-5:00 M-Th EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-273-1550. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SJN

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SUPERVISORY PATENT EXAMINER